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WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : C07K 1/00, 14/00, 17/00

A1

(11) International Publication Number: WO 00/66615

(43) International Publication Date: 9 November 2000 (09.11.00)

(21) International Application Number: PCT/US00/11893

(22) International Filing Date: 2 May 2000 (02.05.00)

(30) Priority Data:
60/132,358 4 May 1999 (04.05.99) US

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(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published
With international search report.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: COMPOSITIONS AND METHODS FOR DETECTION OF ACTIVE PROTEASES

(57) Abstract

A novel assay system is disclosed for detecting the presence or amount of selected active proteases in biological samples. The assay system utilizes a chimeric protease detector protein composed of three domains: (1) a repressor domain, (2) a protease cleavage domain specific for the protease to be assayed, and a reporter domain. The reporter domain is not detectable when linked to the repressor domain, but becomes detectable upon release from the repressor domain by protease–mediated cleavage. Thus, the activity of the selected protein can be determined by measuring the amount of detectable reporter in the sample. Methods and test kits for using the novel assay system in a variety of *in vitro* and *in vivo* applications are also disclosed.